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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/811,576 | 03/29/2004 | Adi A. Scheidemann | ION402 | 2078 |

7590 02/14/2005
EUSTATHIOS VASSILIOU
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EXAMINER

NGUYEN, KIET TUAN

ART UNIT PAPER NUMBER

2881

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/811,576 | SCHEIDEMANN ET AL. | |
| | Examiner | Art Unit | |
| | Kiet T. Nguyen | 2881 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20050209</u> . | 6) <input type="checkbox"/> Other: _____ |

Rejection Under 35 U.S.C. 102(e)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4, 7, 9, 11-13 and 15-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Darling et al. (6,847,036).

Darling et al. (6,847,036) disclose, in figs. 1-13, a charged particle beam detection system used in a Herzog-Mattuch type of mass spectrometer (see col. 2, lines 60-64), which includes a housing having a base plate (see fig. 12); an ion source 50; an electrostatic analyzer 54; a magnetic section 56 having an exit portion; a Faraday cup detector array 4 located at a focal plane section in front of the exit portion; a plurality of printed circuit boards having traces for connecting the detector arrays (see col. 18, lines 49-55); an electrical connecting means 8; a multiplexing unit 2; an amplifier 6; and an insulate substrate for shielding the printed circuit board (see col.19, lines 41-44). A chromatograph connected to the mass spectrometer is considered to be inherent in the Darling et al. (6,847,036) system, since it is well known in the art for using the chromatograph to introduce a sample into the ion source for generating ions in the mass spectrometer (see col. 2, lines 42-43).

Rejection Under 35 U.S.C. 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 5-6, 8, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darling et al. (6,847,036).

Darling et al. (6,847,036) disclose all the features as discussed above except a strip charge detector array as recited in claims 3, 6, 10 and 14; a shift register based direct ion detection chip as recited in claims 5 and 8.

Using the strip charge detector array or the shift register based direct ion detection chip for detecting charged particles is considered to be obvious variation in design, since it well known in the art to use the strip charge detector array or the shift register based direct ion detection chip for detecting ions as applicant's admission in page 5, lines 23-30, thus would have been obvious to one skilled in the art to use the

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strip charge detector array or the shift register based direct ion detection chip in the Darling et al. (6,847,036) system for detecting the ions.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Rockwood et al. disclose a printed circuit board for a time of flight mass spectrometer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KIET T. NGUYEN
PRIMARY EXAMINER